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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,289

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EXAMINER

MORAN, RANDAL D

ART UNIT

PAPER NUMBER

2135

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/765,289	<b>Applicant(s)</b> SHIROGANE, TETSUYA	
	<b>Examiner</b> RANDAL D. MORAN	<b>Art Unit</b> 2135	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15 and 23-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15 and 23-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Claims 1-14 and 16-22 are canceled. Claims 15, 23-33 are pending.
2. This Office Action is in response to amendment filed 11/29/2007.
3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/29/2007 has been entered.
4. Below, Examiner has pointed out particular references contained in the prior art(s) of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claims, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully each reference in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

### *Claim Objections*

1. Considering **Claims 24 and 30**, the acronym "MIB" should be properly defined. "obtaining the MAC address" should read *obtain the MAC address*.  
Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claims 15 and 23-33** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Considering **Claims 23-** lines 18-19, “the access management table.” It is unclear which access management table is being referred to. The examiner believes “an access management table” in line 15 should read “the access management table” as would be consistent with corresponding independent method claim 29.
- Considering **Claims 23 and 29**, the language throughout the claims appears to be inconsistent. Claim 23- lines 9, 12, and 26: Claim 29- lines 6, 9, and 23 all appear to be referring to a source IP address and a Port address of the storage apparatus being contained within the same network. However, the claims recite same segment and same network interchangeably. The specification appears to define the same segment as two things located within the same network. The examiner will treat the claims- lines 9 and 26, and 6 and 23 respectively, as within the same network.
- Considering **Claims 23 and 29**, the language throughout the claims appears to be inconsistent. Claim 23- lines 1, 7, 9, 17, 21, 22, 25-26 and 28: Claim 29- lines 1, 4, 6, 14, 18, 19, 21, 22, and 24 all appear to be referring to an iSCSI login request. However, the claims recite command and iSCSI login request interchangeably.

- Considering **Claims 23-** line 22 **and 29-** line 19, “including the command” is unclear. For the purpose of examination, the examiner will treat this limitation as included within the command.
- Considering **Claims 23-** lines 23-27 **and 29-** lines 20-23, “means for performing said second determination and said third determination in accordance with a source MAC address in the frame of iSCSI login request sent from said host computer and said access management table when the source IP address of the iSCSI login request is in the same segment as the port of its storage apparatus according to said first determination” is unclear.

It is unclear whether the second and third determination is performed in both scenarios.

Scenario 1 being that the source IP address found within the IP header from the iSCSI login request is not contained within the same network as the port address of the storage apparatus. Then the MAC address is obtained in an undefined way according to the independent claim as written. The MAC address is presumably obtained from an SNMP manager requesting an MIB from the host computer.

Scenario 2 being that the source IP address found within the IP header from the iSCSI login request is contained within the same network as the port address of the storage apparatus. Then the source MAC address is obtained from the frame of the iSCSI login request.

For the purposes of examination, the claim will be treated as the second and third determinations being performed in both scenarios but should be rewritten to clearly define the scope of the claim.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 15, 23-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Thompson (US 6,895,461)**, hereafter “Thompson” in view of **Nelson (US 6,292,838)**, hereafter “Nelson”.

Considering **Claims 23 and 29**, Thompson discloses a storage system for processing a command transmitted by a host computer connected to a storage apparatus of the storage system by a network (column 3- lines 59-67, column 4- lines 1-19, Fig. 1), said storage system comprising: a storage unit for storing data to be processed in accordance with said command (column 3- lines 59-67, column 4- lines 1-19, Fig. 5); a memory for holding an access management table for storing first information on identification of said host computer (column 9- lines 25-28, Fig. 5); means for receiving an iSCSI login request transmitted from the host computer (column 7- lines 46-58); means for determining a third determination whether or not a logical unit (LU) specified by the command has been cataloged in the access management table as the LU associated with the source IP address of a frame including the command (column 6- lines 11-42); means for performing said second determination and said third determination in accordance with a source MAC address in the frame of iSCSI login request sent from said host computer and said access management table (column 6- lines 11-42) and means for accessing the LU to process the command when said LU has been cataloged in the access management table as a result of the third determination (column 6- lines 47-67, column 7- lines 15-30).

Thompson does not explicitly disclose a means for determining a first determination whether or not a source address included in an IP header of the iSCSI login request is an IP address in the same segment as a port of the storage apparatus; means for obtaining a MAC address assigned to the port of the host computer when the source address included in the IP header is not an IP address in the same network as

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the port of the storage apparatus as a result of the first determination; means for determining a second determination whether or not the MAC address has been cataloged in an access management table that defines the MAC addresses identifying the host computer; means for approving an access by said iSCSI login request from the host computer to the storage apparatus when the MAC address has been cataloged in the access management table as a result of the second determination; when the source IP address of the iSCSI login request is in the same segment as the port of its storage apparatus according to said first determination.

Nelson discloses a means for determining a first determination whether or not a source address included in an IP header of the iSCSI login request is an IP address in the same segment as a port of the storage apparatus (abstract- lines 4-7); means for obtaining a MAC address assigned to the port of the host computer when the source address included in the IP header is not an IP address in the same network as the port of the storage apparatus as a result of the first determination (abstract, column 9- lines 53-50); means for determining a second determination whether or not the MAC address has been cataloged in an access management table that defines the MAC addresses identifying the host computer (column 9- lines 51-67, column 10- lines 1-3, Thompson- Fig. 5); means for approving an access by said iSCSI login request from the host computer to the storage apparatus when the MAC address has been cataloged in the access management table as a result of the second determination (column 9- lines 51-67, column 10- lines 1-3, Thompson- Fig. 5, column 7- lines 45-58); when the source IP address of the iSCSI login request is in the same segment as the port of its storage apparatus according to said first determination (abstract, column 9- lines 35-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Thompson by whether or not a source address included in an IP header of the iSCSI login request is an IP address in the same segment as a port of the storage apparatus;

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means for obtaining a MAC address assigned to the port of the host computer when the source address included in the IP header is not an IP address in the same network as the port of the storage apparatus as a result of the first determination; means for determining a second determination whether or not the MAC address has been cataloged in an access management table that defines the MAC addresses identifying the host computer; means for approving an access by said iSCSI login request from the host computer to the storage apparatus when the MAC address has been cataloged in the access management table as a result of the second determination; when the source IP address of the iSCSI login request is in the same segment as the port of its storage apparatus according to said first determination as taught by Nelson in order to make the years of development of security in IP networks instantly available to storage networks and to the storage service providers, allowing them to ensure access control to storage and the privacy of data on their shared infrastructure (Thompson- column 14- lines 45-61).

Considering **Claims 24 and 30**, the combination discloses wherein a command is given to an SNMP manager that transmits a request to the host computer to acquire an MIB for the source IP address included in the iSCSI login request to obtain the MAC address (Nelson- column 12- lines 14-32).

Considering **Claims 15 and 25**, the combination discloses wherein a MAC address is obtained from said host computer by adoption of a protocol based on an iSCSI text mode negotiation (Thompson- column 7- lines 45-58).

Considering **Claims 26 and 31**, the combination discloses log data that the iSCSI login request has been made from a port of another network is recorded in a control memory if the source address included in the IP header were not the IP address in the same network as the port of the storage apparatus according to said the first determination (Nelson- column 8- lines 12-27).

Considering **Claims 27 and 32**, the combination discloses determining whether or not a predetermined time has lapsed without a response received from the host computer, wherein said second determination is performed if the storage apparatus receives an SNMP response to a SNMP request to the host computer without causing a timeout (Nelson- column 10- lines 41-50, Fig. 7).

Considering **Claims 28 and 33**, the combination discloses log data indicating that the access from said host computer has not been approved is recorded in a control memory and processing of the command is not carried out if the requested access is determined to be a disallowed access to the LU on the third determination (Thompson- Fig. 5, Nelson- column 8- lines 12-27, Fig. 3).

### ***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - Krueger, M. "Request for Comments 3347." Small Computer Systems Interface protocol over the Internet (iSCSI) Requirements and Design Considerations. pgs. 1-22. July 2002.
  - US 6,845,387 – Creating VPN's between endpoints across a SAN.
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RANDAL D. MORAN whose telephone number is (571)270-1255. The examiner can normally be reached on M-F: 7:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. D. M./  
Examiner, Art Unit 2135

3/6/2008

/KIMYEN VU/  
Supervisory Patent Examiner, Art Unit 2135